

VEGETATION DESCRIPTION FOR DEVILS TOWER NATIONAL MONUMENT

NOTE: "*" Indicates a new formation to the National Vegetation Classification System

[Pinus ponderosa / Mahonia repens Forest](#)

COMMON NAME	Ponderosa Pine / Oregon Grape Woodland
SYNONYM	Ponderosa Pine / Holly-leaf Grape Woodland
PHYSIOGNOMIC CLASS	Forest (I)
PHYSIOGNOMIC SUBCLASS	Evergreen forest (I.A)
PHYSIOGNOMIC GROUP	Temperate or subpolar needle-leaved evergreen forest (I.A.8)
PHYSIOGNOMIC SUBGROUP	Natural/semi-natural (I.A.8.N)
FORMATION	Rounded-crowned temperate or subpolar needle-leaved evergreen forest (I.A.8.N.a.)
ALLIANCE	<i>Pinus ponderosa</i> Forest Alliance

CLASSIFICATION CONFIDENCE LEVEL 2

USFWS WETLAND SYSTEM Upland

RANGE

Globally

A similar vegetation type has been reported from central Montana in the vicinity of Lewiston and Roundup, where it was considered to be a phase of the *Pinus ponderosa* - *Symphoricarpos albus* Habitat Type in Montana (Pfister et al. 1977).

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This community is widespread. It is well developed on the slopes below the base of Devils Tower, as well as on slopes in the western and northern parts of the park.

ENVIRONMENTAL DESCRIPTION

Globally

In the vicinity of Lewiston and Roundup, MT, a similar vegetation type has been reported from gentle slopes and benches, on silt loam to clay loam soils derived from limestone (Pfister et al. 1977). In the northwestern Black Hills in Wyoming, this community has been found predominantly on northerly aspects with slopes from 8 to 26 degrees, in areas underlain by buried talus or sandstone.

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This community occurs predominantly on northerly aspects with slopes from 8 to 26 degrees. It was found in areas underlain by buried talus or sandstone.

MOST ABUNDANT SPECIES

Globally

Strata

Tree canopy

Short shrub

Herbaceous

Species

Pinus ponderosa

Mahonia repens, *Symphoricarpos albus*, *Spiraea betulifolia*, *Juniperus communis*

Schizachne purpurescens

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<u>Strata</u>	<u>Species</u>
Tree canopy	<i>Pinus ponderosa</i>
Subcanopy	<i>Pinus ponderosa</i>
Short shrub	<i>Mahonia repens</i> , <i>Symphoricarpos albus</i>

DIAGNOSTIC SPECIES

Globally

Pinus ponderosa, *Mahonia repens*

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Pinus ponderosa, *Mahonia repens*, *Symphoricarpos albus*

VEGETATION DESCRIPTION

Globally

Few stands of this vegetation type have been studied, and rangewide information is limited. The overstory of this community is dominated by *Pinus ponderosa*. In stands in central Montana, the shrub layer was dominated by *Mahonia repens*, with *Spiraea betulifolia* and *Juniperus communis* also common (Pfister et al. 1977). In the western Black Hills, *M. repens* is dominant with *Symphoricarpos albus* often present but sparse.

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Stands of this vegetation type are dominated by *Pinus ponderosa*. Canopy and subcanopy coverages both range from 10 to 50% typically. *Quercus macrocarpa* occasionally occurs in the subcanopy. Short shrub cover is sparse to moderate, but usually less than 25%. *Mahonia repens* is present consistently, and often dominates the short shrub stratum. *Symphoricarpos albus* is often present, but sparse.

OTHER NOTEWORTHY SPECIES Information not available.

CONSERVATION RANK G3

RANK JUSTIFICATION

DATABASE CODE Cegl000187

COMMENTS

Globally

Few stands of this vegetation type have been studied, and rangewide information is limited.

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Stands of this type originally were classified as *Pinus ponderosa* / *Symphoricarpos albus* Forest. However they differ significantly from that type as previously described for the Black Hills (Thilenius 1972, Hoffman and Alexander 1987). Canopy cover typically is less than 60% and *Symphoricarpos albus* usually is sparse to absent. Both Thilenius (1972) and Hoffman and Alexander (1987) found *Mahonia repens* to be an important component of the short shrub stratum in stands of this type. At Devils Tower this is the case as well, but *M. repens* is much more common and consistent than *S. albus*. During accuracy assessment, the investigator reported, "I did not observe this community [*Pinus ponderosa* / *Symphoricarpos albus* Forest], only the PP/Oregon Grape Woodland [*Pinus ponderosa* / *Mahonia repens*]" (K. West, pers. comm. to D. Salas), again suggesting that the stands of this type at Devils Tower NM differ from previous descriptions. Thus, these stands were classified as *Pinus ponderosa* / *Mahonia repens* Forest even though they differ from the type as described in north-central Montana. As further information is gathered on the rangewide characteristics of both *Pinus ponderosa* / *Symphoricarpos albus* Forest and *Pinus ponderosa* / *Mahonia repens* Forest, the stands at Devils Tower NM should be compared to verify their classification here.

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REFERENCES

Hoffman, G. R. and R. R. Alexander. 1987. Forest vegetation of the Black Hills National Forest of South Dakota and Wyoming: A habitat type classification. Research Paper RM-276. USDA Forest Service, Rocky Mountain Forest and Range Experiment Station, Fort Collins, CO. 48 p.

Pfister, R. D., B. L. Kovalchik, S. F. Arno, and R. C. Prebby. 1974. Forest habitat types of Montana. INT- 34. USDA Forest Service Intermountain Forest and Range Experiment Station, Missoula, MT. 312p.

Thilenius, J. F. 1972. Classification of deer habitat in the ponderosa pine forest of the Black Hills, South Dakota. RM-91. USDA Forest Service, Rocky Mountain Forest and Range Experiment Station, Fort Collins, CO. 28p.